

Name _____

Hour _____

Pythagorean Theorem Review

1. Builder Nick is refinishing his basement and started by building the walls. The walls need to be rectangles. After building the first wall he measures the sides of the rectangle and the diagonal. The sides measure 8 feet high and 15 feet long. The diagonal measures 17 feet. Is the wall that Nick built a rectangle? Prove your answer with math and explain your answer in complete sentences.

2. The size of a TV screen is given by the length of the diagonal of the TV screen. You have an entertainment cabinet that has a rectangular space that measures 21.6 inches wide and 16.2 inches high. You just ordered a 32 inch TV. Will your new TV fit in your entertainment cabinet? Prove your answer with math and explain your answer in complete sentences.

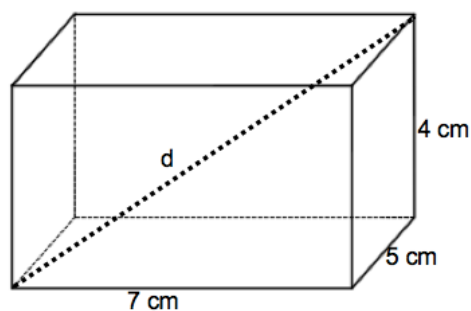
Find the length of unknown side using the Pythagorean Theorem. Draw the right triangle(s) for each diagram. Round all answers to the nearest hundredth if necessary.

3. A disabled ship radios to shore for help. The Coast Guard determines that the ship is 16 miles east and 43 miles north of the station. What is the direct distance between the ship and the Coast Guard station?

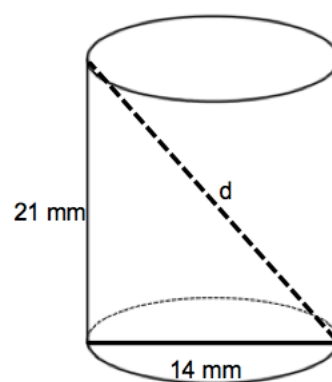
4. Ben leans a 20 foot ladder against the house. The bottom of the ladder is 8 feet from the house. How high up the side of the house is the top of the ladder?

5. If the legs of a triangle are 120 cm and 115 cm, what is the length of the hypotenuse?

6. Solve for d.



7. Solve for d.



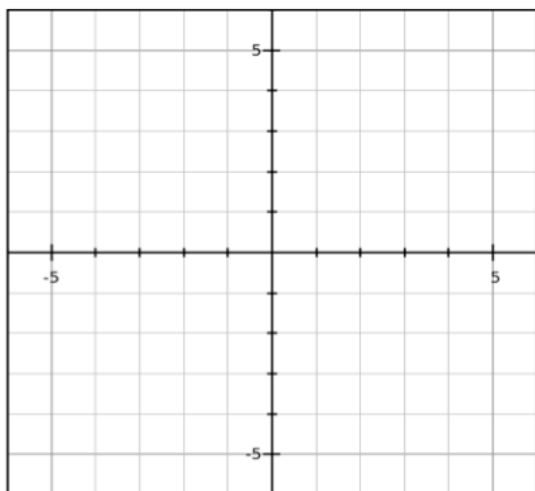
The sides to a triangle are given. Determine whether the triangle is a right triangle. EXPLAIN your answer.

8. 9 cm, 40 cm & 41 cm.

9. 16 ft, 17 ft & 5 ft

Find the distance between the two points.

10. $(5, -3)$ & $(-4, -6)$



11. $(0, -4)$ & $(-4, 5)$

